



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,917	03/31/2004	Che-Hsiung Hsu	UC0420USNA	6333
23906 7590 10/19/2007 E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1128 4417 LANCASTER PIKE WILMINGTON, DE 19805			EXAMINER WOODWARD, ANA LUCRECIA	
			ART UNIT 1796	PAPER NUMBER
			NOTIFICATION DATE 10/19/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-Legal.PRC@usa.dupont.com

Office Action Summary

Application No.

10/814,917

Applicant(s)

HSU, CHE-HSIUNG

Examiner

Ana L. Woodward

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on July 24, 2007; July 6, 2007
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 13-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 is/are allowed.
- 6) ☒ Claim(s) 1-9, 13-15 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/6/07
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102/103

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7, 13, 14, 17 and 18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. 5,300,575 (Jonas et al) as per reasons of record.

Claim Rejections - 35 USC § 103

4. Claims 8, 9, 15, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 5,300,575 (Jonas et al), described hereinabove, in view of U.S. 5,002,700 (Otagawa et al) as per reasons of record.
5. Claims 1-9, 13-15 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 5,002,700 (Otagawa et al) in view of U.S. 5,300,575 (Jonas et al) and U.S. 5,185,100 (Han et al) as per reasons of record.

Response to Arguments

6. Applicant's arguments filed July 24, 2007 have been fully considered but they are not persuasive.

As to applicants' allegation that the polystyrene sulfonic acid of Jonas et al is water-soluble, and thus not colloid-forming, would appear to be contra to the teachings of the reference which are directed to the formation of aqueous dispersions. Jonas et al's polyanions include anions of polymeric carboxylic acids, such as polyacrylic acids, polymethacrylic acids or polymaleic acids, and polymeric sulfonic acids such as polystyrene sulfonic acids and polyvinyl sulfonic acids. These polycarboxylic acids and polysulfonic acids may also be copolymers of vinyl carboxylic and vinyl sulfonic acids with other polymerizable monomers. These polymeric carboxylic acids and polymeric sulfonic acids appear to be of the same type described in applicants' specification (pages 8-11, etc.) and, as such, there is reasonable basis for believing that they would also be colloid-forming. It is furthermore noted that polymer lattices or polymer dispersions which contain acidic groups as $-\text{SO}_3$, $-\text{COO}$ and $-\text{PO}_3^{2-}$ can be added to the dispersions to ensure sufficient stability (column 4, lines 63-68). Polymers suitable for these polymer dispersions or lattices would also correspond to the presently claimed colloid-forming polymeric acids (column 5, lines 1-13).

With respect to claims 4 and 5, these claims merely further describe, as opposed to require, the polypyrrole and polyaniline species per claim 1 and, as such, have been incorporated into the rejection based on Jonas et al.

In response to applicant's argument that there is no suggestion to combine the Jonas et al and Otagawa et al references, the examiner recognizes that obviousness can only be established

Art Unit: 1796

by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Otagawa et al's background disclosure provides the teaching that polyaniline and polythiophene are electrically-conducting polymer equivalents and their common use in electrochemical applications. Accordingly, it is obvious to one having ordinary skill in the art that the disclosures of Jonas et al and Otagawa et al are sufficiently similar both in terms of materials and purpose such that the teachings of one are relevant to the other. Accordingly, it would have been obvious to one having ordinary skill in the art to have substituted fluorinated sulfonic acid polymer for the polyvinylsulfonic acid expressly used by Jonas et al with the reasonable expectation of success. Absent evidence of unusual or unexpected results, no patentability can be seen in said claimed subject matter.

The results in Table 1 of applicants' specification have been reviewed but are not deemed to be probative of unexpected results for using the non-polymeric acid and colloid-forming polymeric acid in combination. In this regard, it is noted while a comparison has been made with a dispersion containing only non-polymeric acid, none has been made with one containing only colloid-forming polymeric acid. As such, it can not be determined as to whether or not the results obtained in example 1 are the unexpected, as opposed to the expected additive effect of using both the non-polymeric and polymeric acids. In any event, even if the results were demonstrative of unexpected results, the evidence would not be commensurate in scope with the claims, which are not limited to the specific acids shown.

Allowable Subject Matter

7. Claim 16 is allowed. The prior art of record neither anticipates nor renders obvious a buffer layer made from an aqueous dispersion comprising polypyrrole, non-polymeric acid dopant and polymeric perfluoroethylenesulfonic acid.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

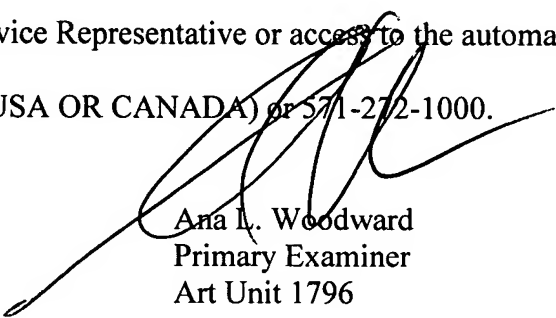
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana L. Woodward whose telephone number is (571) 272-1082. The examiner can normally be reached on Monday-Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1796

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ana L. Woodward
Primary Examiner
Art Unit 1796
